



A.D. 1858, 13th OCTOBER. N° 2281.

S P E C I F I C A T I O N

OF

WILLIAM HIGGINBOTTOM TREACHER.

RESPIRATORS.

LONDON:

PRINTED BY GEORGE E. EYRE AND WILLIAM SPOTTISWOODE,  
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1859.







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## Respirators.

*(This Invention received Provisional Protection only.)*

PROVISIONAL SPECIFICATION left by William Higginbottom Treacher at the Office of the Commissioners of Patents, with his Petition, on the 13th October 1858.

I, WILLIAM HIGGINBOTTOM TREACHER, of Blackfriars Road, in the County of Surrey, Surgical Mechanician, do hereby declare the nature of the said Invention for "IMPROVEMENTS IN RESPIRATORS," to be as follows:—

My Invention consists, first, in forming respirators with separate chambers for inhalation and exhalation in the manner hereafter described; and, second, in fitting into the inhaling chamber powdered charcoal or other chemical  
10 purifying agent.

I construct my respirator with an outer shield or plate, which may be covered with velvet, cloth, silk, or other textile material; at a small distance behind this outer shield I place a similar plate, and bring both plates together at their ends; along the centre of and between the plates I fix a partition, which  
15 shuts off all communication between the top and bottom of the plates. In the back plate I cut two slots, one above and the other below the partition, and over these slots I fix upon slight springs or blades, thin pieces of metal, one to each slot. These pieces of metal carried on the blades form valves, and I make one to open inwards and the other outwards; I cover the space  
20 between the outer and inner plates with perforated metal both at top and at bottom, and for convenience of wear I apply a perforated metal screen at the back of the inner plate, and pad the screen to make it fit over the mouth.

Where desired I place powdered charcoal or sponge moistened with any

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*Treacher's Improvements in Respirators.*

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purifying agent in that chamber to which the valve opening inwards is fitted. In this respirator, without the slightest additional effort in breathing, air is inhaled through one chamber and exhaled through a separate chamber; consequently the air exhaled is not again drawn into the lungs, nor can it commingle with that drawn in.

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